

B2 The invention will now be described in more detail with reference to the drawing,
wherein:

Figure 1 is a map of vector RPR9-IL 4-Y124 4327.--

✓ and then on the very next line insert the following heading at the left-hand margin:

--DESCRIPTION OF THE PREFERRED EMBODIMENTS--

IN THE CLAIMS:

✓ Cancel claims 1 and 2 and substitute:

-3. A mutant human interleukin-4 (hIL-4) protein consisting of the amino acid sequence of wild-type hIL-4 with two modifications, wherein the first modification is selected from the group consisting of the replacement of one or more of the amino acids occurring in the wild-type hIL-4 protein at positions 121, 124 or 125 with another natural amino acid, and the second modification is at least one modification selected from the group consisting of:

B3

- a) the modification of the N-terminus therein;
- b) the modification of the C-terminus therein;
- c) the deletion of potential glycosylation sites therein;
and/or
- d) the coupling of the protein to a non-protein polymer;

said mutant hIL-4 protein being an antagonist or partial agonist of wild-type hIL-4.--

2. A mutant hIL-4 protein according to claim *3*, which consists of the amino acid sequence of wild-type hIL-4 with two modifications, wherein the first modification is selected from the group consisting of the replacement of one or more of the amino acids occurring in the wild-type hIL-4 protein at positions 121, 124 or 125 by another natural amino acid, and the second modification is at least one modification selected from the group consisting of:

B3

- a) the modification of the N-terminus therein by the deletion or insertion of one or more amino acids;
- b) the modification of the C-terminus therein by the deletion or insertion of one or more amino acids;
- c) the deletion of potential glycosylation sites; and/or
- d) the coupling of the protein to a non-protein polymer selected from the group consisting of polyethylene glycol, polypropylene glycol and polyoxyalkylenes;

said mutant hIL-4 protein being an antagonist or partial agonist of wild-type hIL-4.--

3. A mutant hIL-4 protein according to claim *4*, which consists of the amino acid sequence of wild-type hIL-4 with two modifications, wherein the first modification is selected from the group consisting of the replacement of one or

more of the amino acids occurring in the wild-type hIL-4 protein at positions 121, 124 or 125 is replaced by another natural amino acid, and the second modification comprises the modification of the N-terminus therein by the insertion before the natural N-terminal histidine residue of an amino acid selected from the group consisting of alanine, glycine, proline, serine, threonine and valine, said mutant hIL-4 protein being an antagonist or partial agonist of wild-type hIL-4.--

4
-7. A mutant hIL-4 protein according to claim *5*, wherein said second modification further comprises:

- a) the deletion of the potential glycosylation sites at positions 38 and/or 105 by replacement of asparagine in these positions by aspartic acid; and/or
- b) the coupling of the protein to polyethylene glycol.--

5
-7. A therapeutic composition comprising:

- a) a mutant human interleukin-4 (hIL-4) protein according to claim 3; and
- b) a physiologically acceptable carrier.--

4
-8. A therapeutic composition comprising:

- a) a mutant human interleukin-4 (hIL-4) protein according

to claim 7, and

b) a physiologically acceptable carrier.--

7

A therapeutic composition comprising:

a) a mutant human interleukin-4 (hIL-4) protein according
to claim 3; and

b) a physiologically acceptable carrier.--

8

A therapeutic composition comprising:

a) a mutant human interleukin-4 (hIL-4) protein according
to claim 6; and

b) a physiologically acceptable carrier.--

9

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W1
A method of antagonizing or partially agonizing the effect of
human interleukin-4 (hIL-4) comprising contacting cells expressing the hIL-4-
receptor with an antagonistic or partially agonistic effective amount of a mutant
hIL-4 protein according to claim 3.--

10

11
A method of antagonizing or partially agonizing the effect of
human interleukin-4 (hIL-4) comprising contacting cells expressing the hIL-4-
receptor with an antagonistic or partially agonistic effective amount of a mutant
hIL-4 protein according to claim 2.--